

The details are shown in the following table, in which the stations are arranged according to the greatest possible duration of sunshine, and not according to the observed duration as heretofore.

Difference between instrumental and personal observations of sunshine.

Stations.	Apparatus.	Total possible duration for the whole month.	Personal estimated area of clear sky.	Instrumental record of sunshine.			
				Photographic.	Difference.	Thermometric.	Difference.
Bismarck, N. Dak.	P.	479.6	59	53	+ 4	87	+ 5
Helena, Mont.	P.	479.6	57	73	+ 6	87	+ 5
Portland, Oreg.*	P.	475.7	32	87	+ 5	87	+ 5
Eastport, Me.	P.	471.7	40	51	+11	87	+ 5
Minneapolis, Minn.	P.	471.7	40	51	+11	87	+ 5
Northfield, Vt.	P.	468.4	35	45	+10	87	+ 5
Portland, Me.	P.	468.4	37	45	+10	87	+ 5
Rochester, N. Y.	T.	465.2	53	53	0	64	+ 6
Buffalo, N. Y.	T.	465.2	41	53	0	64	+ 6
Boston, Mass.	T.	461.8	46	53	0	64	+ 6
Chicago, Ill.	T.	461.8	58	53	0	66	+ 8
Cleveland, Ohio	P.	461.8	46	59	+13	62	+ 3
Des Moines, Iowa	P.	461.8	59	59	0	64	+ 5
Detroit, Mich.	T.	461.8	59	59	0	64	+ 5
Dubuque, Iowa	T.	461.8	44	59	0	69	+ 25
Eureka, Cal.	P.	458.6	39	37	- 2	53	- 1
New York, N. Y.	P.	458.6	54	54	0	53	- 1
Salt Lake City, Utah.	T.	458.6	40	71	+81	48	+11
Columbus, Ohio.	T.	455.2	37	53	+16	48	+11
Denver, Colo.	T.	455.2	53	63	+10	48	+11
Philadelphia, Pa.	T.	455.2	37	53	+16	73	+36
Baltimore, Md.	T.	453.0	37	53	+16	48	+11
Cincinnati, Ohio	T.	453.0	54	53	- 1	81	+27
Kansas City, Mo.	P.	453.0	52	61	+ 9	72	+16
St. Louis, Mo.	P.	453.0	56	53	- 3	72	+16
Washington, D. C.	P.	453.0	40	52	+12	75	+24
Dodge City, Kans.	P.	450.1	55	63	+ 8	76	+ 9
Louisville, Ky.	T.	450.1	61	67	+ 6	91	+ 3
San Francisco, Cal.	T.	447.4	88	88	0	91	+ 3
Fresno, Cal.	P.	447.4	37	55	+18	83	+29
Santa Fe, N. Mex.	T.	442.0	54	54	0	34	-13
Little Rock, Ark.	T.	439.7	47	47	0	58	+16
Atlanta, Ga.	T.	439.7	42	42	0	58	+16
Wilmington, N. C.	P.	437.2	50	73	+23	66	+ 4
Phoenix, Ariz.	P.	437.2	66	62	- 4	89	+ 4
San Diego, Cal.	P.	434.5	46	61	+15	66	+ 1
Savannah, Ga.	T.	434.5	85	85	0	89	+ 4
Vicksburg, Miss.	T.	429.6	65	65	0	66	+ 1
New Orleans, La.	T.	429.6	65	65	0	66	+ 1
Galveston, Tex.	P.	427.4	68	83	+15	66	+ 1

* Record by both methods.

ATMOSPHERIC ELECTRICITY.

Numerical statistics relative to auroras and thunderstorms are given in Table X, which shows the number of stations from which meteorological reports were received, and the number of such stations reporting thunderstorms (T) and auroras (A) in each State and on each day of the month, respectively.

Thunderstorms.—The dates on which reports of thunderstorms for the whole country were most numerous were: 3d, 224; 4th, 202; 13th, 209; 15th, 338; 22d, 205; 27th, 247.

Thunderstorm reports were most numerous in: Illinois, 239; Iowa, 201; Missouri, 275; North Carolina, 241; Ohio, 482; Pennsylvania, 202.

Thunderstorms were most frequent in: North Carolina, 31 days; Colorado, 30; Georgia and New Mexico, 29; Florida and South Carolina, 28; Kansas, Tennessee, and Texas, 27.

Auroras.—The evenings on which bright moonlight must have interfered with observations of faint auroras are assumed to be the four preceding and following the date of full moon, viz, from the 20th to the 28th, inclusive. On the remaining twenty-two days of this month 104 reports were received, or an average of about 5 per day. The date on which the number of reports especially exceeded this average was: 11th, 58.

Auroras were reported by a large proportion of observers in: Montana, 38; North Dakota, 28; Wisconsin, 17 per cent.

Auroras were reported most frequently in: Montana and North Dakota, 6 days; New Jersey, Ohio, and Wisconsin, 4 days.

CANADIAN REPORTS.

Thunderstorms were reported as follows: St. Johns, 11th; Grindstone, 15th; Halifax, 31st; Grand Manan, 13th; Yarmouth, 13th, 15th, 16th; St. Andrews, 11th, 13th; Charlottetown, 13th, 16th; Chatham, 2d, 12th; Father Point, 12th, 22d; Quebec, 12th, 17th, 22d, 27th, 30th; Montreal, 5th, 6th, 13th, 15th, 22d, 30th; Rockcliffe, 22d; Toronto, 6th, 12th, 28th, 29th; Port Stanley, 4th, 13th, 14th, 15th, 26th to 29th, 31st; Saugeen, 4th, 13th; Parry Sound, 9th, 14th, 22d; Port Arthur, 2d, 12th, 22d, 26th; Minnedosa, 4th, 14th, 15th, 17th, 19th; Qu'Appelle, 16th, 19th, 29th; Medicine Hat, 1st, 2d, 16th; Swift Current, 1st, 7th, 9th, 12th; Calgary, 24th, 28th; Prince Albert, 8th, 16th, 24th, 30th, 31st; Battleford, 8th, 10th, 16th.

Auroras were reported as follows: Sydney, 11th; Grand Manan, 11th; Charlottetown, 11th; Father Point, 11th; Quebec, 10th, 11th, 13th, 23d, 31st; Montreal, 11th; Toronto, 11th; Winnipeg, 2d, 6th; Minnedosa, 4th, 8th, 10th, 11th, 12th; Prince Albert, 3d.

INLAND NAVIGATION.

The extreme and average stages of water in the rivers for the current month are given in Table VIII, from which it appears that the Congaree, at Columbia, S. C., rose to 3.2 above danger line on the 8th, and the Willamette, at Portland, Oreg., rose to 8.5 above danger line on the 3d. In addition to these the Wabash, at Mount Carmel, Ill., was within 0.7 of the danger line from the 29th to 31st, and the Savannah at Augusta was within 2.4 of danger on the 10th. The Missouri at Kansas City was within 1.9 on the 6th.

LOCAL FLOODS.

Very many reports of high water and great damage due to local rains in small streams have come to hand; these are summarized in the following brief list arranged by dates. Most of these reports are culled from telegrams in the daily papers and are liable to occasional errors of one day.

5th.—Bellaire, Belmont County, Ohio; Ohio and Marshall counties, and Moundsville, W. Va.; Pipe Creek, Ohio, opposite Moundsville; Four Mile, near Jackson, Ohio; Frankfort, Ky.

6th.—New York, N. Y., and vicinity; Newark and Flemington, N. J.; Laurel Hill, L. I.

10th.—Iredell, Yadkin and Catawba Rivers, Scotland Neck, Tillery, and Roanoke River, N. C.

12th.—Weldon, N. C.

14th.—McArthur, Ohio; Pittsburg and Alleghany City, Pa.; Phoenix, Ash Fork, Martinez, Congress, and Kyrene, Ariz.

15th.—Pittsburg, Alleghany City, Turtle Creek, Wilmerding, Greensburg, Export, Delmont, and Crabtree, Pa.; New York, N. Y.; Grantsville, Yellow Creek, Carrollton (7.30 p.m.), Marietta, and Lima, Ohio.

18-19th.—Kansas City, Kans. (local paper called this a cloud-burst, although only three inches of rain fell in two hours); Warrensburg, Macon, Shelbyville, Blue Springs, and Hannibal, Mo.; Warsaw, Valparaiso, and Anderson, Ind.; Fairbury and Percy, Ill.; Erie, Pa.

20th.—Portsmouth, Bowling Green, Wood County, and Wauseon, Ohio; Pittsburg and Alleghany City, Pa.; Centralia, Ill., 20th, 10 p. m. to 21st, 10 a. m., very heavy rain; Evansville (8.25 a. m. of the 20th to 8 a. m. of 21st, heavy rain), and Brazil, Ind.

20th-21st.—Bensons Creek, four miles from Frankfort, Shelbyville, Lexington, Louisville, Shelby, Fayette and Woodford counties, Lawrenceburg, Ky.; Manchester, Newton, Winchester, Aberdeen, and West Union, Ohio.